

Abstract of the Disclosure

In a SFN cellular broadcast system, means for implementing a bidirectional personalized channel with subscribers, comprising: A. means for allocating a first group of subcarriers to the broadcast transmission and a second group of subcarriers to the personalized channels; B. means for reducing interference in the broadcast channel using equalizer means; and C. means for reducing interference in the personalized channel using a controlled allocation of subcarriers in the second group to each subscriber. In a broadcast SFN system using OFDM transmission from a base station to subscriber units, means for achieving a bi-directional channel comprising transmitting means in the subscriber units for a transmission of signals orthogonal to the signals transmitted from the base station, and receiving means in the base station for receiving the orthogonal signals.